

south of Detroit, had pencilled a label, "Lost a boot this day in the mud of a slough," or that Dr. Ortmann had thus commemorated an event, "Obtained these shells by the grace of moonshiners who first mistook me for a revenue officer and were in mind to deal with me accordingly," or, again, that Mr. Clench had chronicled, "Here I broke a rib pulling Okkelberg out of the water"—these real and, in the telling, pleasurably exciting occurrences would not have been lost to that part of conchological history which in particular is of human interest.

Mr. E. B. Williamson collected fresh-water clams before he did dragon-flies, and so an incident of his career can be tugged into this argument. He went out from Pittsburgh to an upstream part of the Allegheny River in the period in which railroads promoted Sunday excursions. Careful of a new pair of trousers, he changed into overalls behind a bush. On the river, he recognized a species of dragon-fly which he knew to be represented in museums by only two specimens. All day he slopped up and down the shallows and bars. All day he swung his insect net like a gesticulating senator. He whooped elation over a catch and cursed the ones that got by him. He was in the state of mind that Tom McGinty would be on his Florida shore had Tom tripped over one of Captain Kidd's treasure chests. A toot of the locomotive whistle brought Williamson back to the train, loath to depart. Halfway home, he discovered that he'd left his trousers in their hiding place. Surely, his labels would have been enriched if he had gone beyond details of locality and the prescribed entomological memoranda and written, "This is the spot where I lost my pants."

FOUR NEW GASTROPODS FROM THE GULF OF CALIFORNIA

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A Contribution from the Museum of Paleontology, University of California, Berkeley, California

On the cruise of the *E. W. Scripps* to the Gulf of California, in the fall of 1940, a number of mollusca were collected in snapper samples and cores from various depths. These mollusks were

identified by Mr. A. M. Strong of Los Angeles who suggested that the present author undertake the descriptions of the following new species. Mr. Strong's help is gratefully acknowledged.

From locality A 3599, in Sal Si Puedes Channel between the San Lorenzo Islands and Peninsula of Lower California, *Trophon lorenzoensis* n. sp. and *T. diazi* n. sp. were brought up in the mud on a mushroom anchor from a depth of 860 fathoms. They were associated with *Crassinella varians* (Carpenter), *Pecten per-nomus* Hertlein, *Solemya panamensis* Dall, *Tellina paziana* Dall, *Cypreolina margaritula* (Carpenter), *Turbonilla* (*Strioturbonilla*?) sp. indet. and *Cadulus panamensis* Sharp and Pilsbry. This locality is apparently an isolated deep basin with a sill at a depth of about 150 fathoms. The bottom temperature is over 11° C. whereas the normal temperature for this depth in the open Gulf is close to 4° C. From the data obtained at this station it appeared that there is a bottom current of at least one half knot per hour. It is possible that the new species may be endemic to this basin, being isolated by the surrounding shallow water.

Vitrinella tiburonensis n. sp. was collected in 393 meters depth at loc. A 3634, lat. 28° 46.8' N, long. 112° 51.3' W, west of Tiburon Island. It was associated with *Phacoides mazatlanica* Carpenter, *Sphenia* sp., *Tellina* sp., *Acteocina smirna* Dall, *Alvania monser-ratensis* Baker, Hanna and Strong, *Cyclostrema* sp. indet., *Del-phinoidea* cf. *spiritualis* Baker, Hanna and Strong, *Delphinoidea* sp., *Epitonium appressicostatum* Dall?, *Scissilabra* sp. indet., and *Turbonilla* (*Strioturbonilla*) n. sp.

Vitrinella guaymasensis n. sp. was associated with the following species:

	Guaymas A 3603	Conception Bay A 3627	Bay A 3628
<i>Aera nux</i> Sowerby		x	x
<i>Chione gnidia</i> (Broderip and Sowerby)	x		
<i>Corbula nuciformis</i> Sowerby		x	
<i>Cuspidaria dulcis</i> Pilsbry and Lowe		x	
<i>Laevicardium elenense</i> (Sowerby)		x	
<i>Pecten circularis</i> Sowerby		x	
<i>Acteocina carinata</i> (Carpenter)	x	x	x
<i>Alabina diomedae</i> Bartsch	x	x	x
<i>Caecum firmatum</i> Adams	x		x

	Guaymas A 3603	Conception Bay A 3627	Bay A 3628
<i>Circulus cerrosensis</i> Bartsch.....		x	
<i>Crepidula</i> sp.	x		
<i>Cylichna defuncta</i> Barker and Hanna		x	x
<i>Cyclostrema</i> cf. <i>xantusi</i> Bartsch	x		
<i>Epitonium</i> sp.			x
<i>Iselica maculosa</i> (Carpenter)		x	x
<i>Mangelio</i> sp.		x	
<i>Melanella</i> cf. <i>abreojosensis</i> Bartsch		x	
<i>Nassarius versicolor</i> (Adams).....		x	
<i>Odostomia</i> (<i>Besla</i>) <i>convexa</i> Car- penter		x	x
<i>Odostomia</i> (<i>Chrysallida</i>) <i>telescop-</i> <i>ium</i> Carpenter	x	x	x
<i>Odostomia</i> ? sp.		x	
<i>Pyramidella</i> (<i>Triptychus</i>) <i>hermosa</i> Lowe	x		
<i>Retusa luticola</i> Adams			x
<i>Turbonilla</i> (<i>Bartschella</i>) <i>subangu-</i> <i>lata</i> Carpenter			x
<i>Turbonilla</i> (<i>Chemnitzia</i>) <i>muricata</i> Carpenter	x		
<i>Volvulella cylindrica</i> Carpenter ? ...			x
<i>Cadulus panamensis</i> Sharp and Pilsbry		x	x

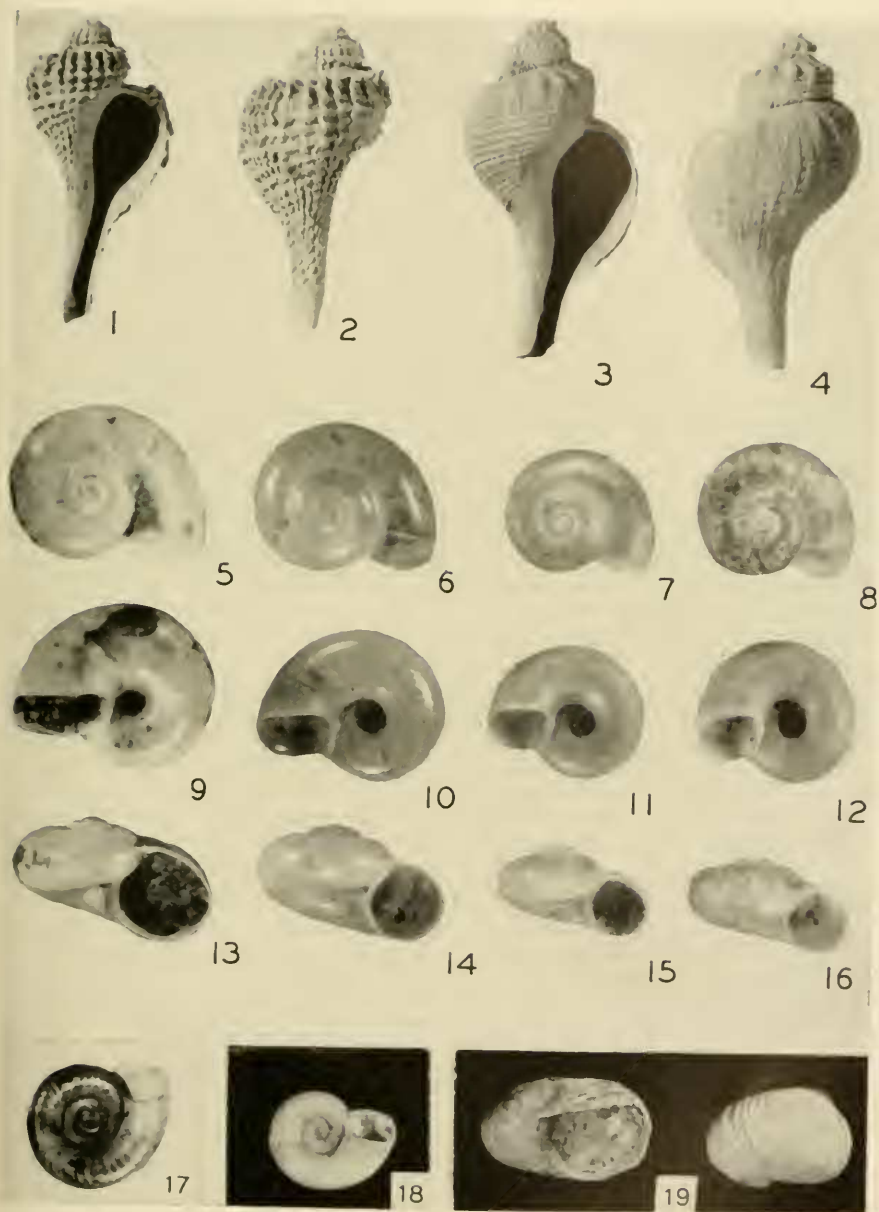
Locality A 3603 is from a depth of 4 meters, localities A 3627 and A 3628 from depths of 26 meters.

Most of the specimens from localities A 3603, A 3627, A 3628 and A 3634 are of small size, falling in the general size range often called "submegascopic."

The description of the new species follows:

TROPHON (BOREOTROPHON) DIAZI n. sp. Pl. 8, figs. 3, 4.

Shell of medium size, over four whorls (nuclear missing), spire of medium height, anterior canal moderately long and narrow; early whorls slightly tabulate, body whorl rounded; penultimate whorl with seven rounded spiral ribs below the tabulation, interspaces slightly smaller, two upper spiral ribs slightly smaller than remainder; about 14 moderately distinct axial ribs on penultimate whorl, beginning just below suture and directed posteriorly on the tabulation, producing a small node on the angu-



Figs. 1, 2, *Trophon lorenzoensis* n. sp. - 1.7, holotype. Figs. 3, 4, *Trophon (Borotrophon) diazi* n. sp. - 1.7, holotype. Figs. 5, 9, 13, *Vitrinella tiburonensis* n. sp. - 1.5, holotype. Figs. 6, 10, 14, *Vitrinella guaymasensis* n. sp. - 1.5, holotype. Figs. 7, 11, 15, and 8, 12, 16, *Vitrinella guaymasensis* n. sp. - 1.5, paratypes. Figs. 17, 18, *Gyraulus cressmani* n. sp., type and paratype. Fig. 19, *Parapholys packardii corrugata* n. subsp., type.

lation and then directed anteriorly on the lower part of the whorl, becoming obsolescent about half way to the suture; last half of body whorl with axial ribs replaced by irregular heavy growth lines; suture abutting; body whorl with about 12 spiral ribs, not extending down onto the anterior canal which is smooth; aperture ovate, anterior canal of moderate length, not reflexed, lower end rather square; inside of outer lip smooth, a slight callus wash on the columella.

Dimensions of holotype: height 25.9 mm., diameter of body whorl 13.0 mm., length of aperture and anterior canal 18.4 mm.

Holotype: Univ. Calif. Mus. Paleo. no. 14800, loc. A 3599.

Occurrence: loc. A 3599, Sal Si Puedes Channel, between the San Lorenzo Islands and the Peninsula of Lower California, depth 860 fathoms.

Remarks.—This species was at first confused with *T. lorenzocnsis* n. sp., assuming that the varices of that species has been worn off. However, detailed examination reveals that the number of spiral ribs is greater, the spire is higher, the anterior canal is slightly shorter and not reflexed, and the spiral ribs do not extend onto the anterior canal. It is possible that this species should be referred to some other genus.

TROPHON LORENZOENSIS n. sp. Pl. 8, figs. 1, 2.

Shell of medium size, about four whorls, including partially eroded nuclear whorls (slightly over one whorl); spire of medium height, upper surface of whorls tabulate, sides rounded; penultimate whorl with three rounded spiral ribs about as wide as their interspaces, post nuclear whorl with two spiral ribs, the third being intercalated at about the beginning of the third whorl; body and penultimate whorl with moderately prominent lamellar varices, 22 in number on the body whorl; varices with a small "spine" on the angulation at the edge of the tabulation, accenting the angle; 21 spiral ribs on the body whorl extending down nearly to the tip of the anterior canal; anterior canal very long, slightly reflexed posteriorly, tip somewhat pointed; aperture ovate, outer lip with 8 grooves corresponding to the spiral ribs on the surface; inner lip covered with a callus wash.

Dimensions of holotype: height 23.3 mm., diameter of body whorl 11 mm., length of aperture and anterior canal 18.5 mm.; of paratype, height 12.3 mm., diameter of body whorl 6.5 mm., length of aperture and anterior canal 9.4 mm.